

### **DETAILED ACTION**

1. Applicant has amended claims 94, 96-97, 109, 111-112, 124, 126-127 in the amendment filed on 5/27/2009.

Claims 94, 96-99, 101-106, 108-109, 111-114, 116-121, 123-124, 126-129, 131-136, 138-144 are pending in this Office Action.

### **EXAMINER'S AMENDMENT**

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Attorney Wischhusen, Carl on 6/18/2009.

**In claims:** please replace claims 94, 96, 109, 111, 124 and 126 with amended claims (marks show changes).

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94. (Currently Amended) A method for presenting materials corresponding to a navigation state, the method comprising:

receiving a user selection of an expression of attribute-value pairs;

producing a plurality of refinement options and a plurality of ancestors by processing, in each server of a plurality of servers, processing the expression of attribute-value pairs to produce at least one refinement option and at least one ancestor;

combining the plurality of refinement options and plurality of ancestors to form combined refinement options, the combined refinement options including at least one refinement navigation state;

determining a the navigation state associated with the expression of attribute-value pairs;

providing materials associated with the navigation state; and  
providing the combined refinement options,

wherein the combining comprises: taking a union of the plurality of refinement options, determining a set of ancestors for each refinement option of the plurality of refinement options, from the plurality of ancestors produced in the plurality of servers, to form sets of ancestors, computing an intersection of all of the sets of ancestors, and computing the combined refinement options based on terms in the intersection of all sets of ancestors, including identifying at least two

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related terms among the plurality of refinement options, and computing, for the at least two related terms, a least common ancestor of the related terms, and

wherein a first server of the plurality of servers acts as a master server and some of the plurality of servers act as slave servers, the method further comprising the master server distributing a request for a navigation state to a plurality of slave servers, the slave servers computing navigation states for these requests and returning the results to the master server, and the master server combining the results from the slave servers to obtain a navigation state corresponding to the request, wherein the combining the results is based on the combining the plurality of refinement options and plurality of ancestors.

96. (Currently Amended) The method of claim 94, wherein the least common ancestor is defined by the partial order among the related terms.

109. (Currently Amended) A computer-readable storage medium storing computer- executable instructions that, when executed by a computer, cause the computer to perform a method for presenting materials corresponding to a navigation state, the method comprising:  
receiving a user selection of an expression of attribute-value pairs;

producing a plurality of refinement options and a plurality of ancestors by processing, in each server of a plurality of servers, processing the expression of

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attribute-value pairs to produce at least one refinement option and at least one ancestor;

combining the plurality of refinement options and plurality of ancestors to form combined refinement options, the combined refinement options including at least one refinement navigation state;

determining a the navigation state associated with the expression of attribute-value pairs;

providing materials associated with the navigation state; and  
providing the combined refinement options,

wherein the combining comprises: taking a union of the plurality of refinement options, determining a set of ancestors for each refinement option of the plurality of refinement options, from the plurality of ancestors produced in the plurality of servers, to form sets of ancestors, computing an intersection of all of the sets of ancestors, and computing the combined refinement options based on terms in the intersection of all sets of ancestors, including identifying at least two related terms among the plurality of refinement options, and computing, for the at least two related terms, a least common ancestor of the related terms, and

wherein a first server of the plurality of servers acts as a master server and some of the plurality of servers act as slave servers, the method further comprising the master server distributing a request for a navigation state to a plurality of slave servers, the slave servers computing navigation states for ~~those~~

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requests and returning ~~the~~ results to the master server, and the master server combining the results from the slave servers to obtain a navigation state corresponding to the request, wherein the combining the results is based on the combining the plurality of refinement options and plurality of ancestors.

111. (Currently Amended) The computer-readable storage medium of claim 109 wherein the least common ancestor is defined by ~~the~~ partial order among the related terms.

124. (Currently Amended) A system for presenting materials corresponding to a navigation state, comprising:

~~at least one server that each:~~

at least one server that includes a computer readable storage medium for storing the materials, the at least one server that:

receive a user selection of an expression of attribute-value pairs; and  
produce at least one refinement option by processing the expression of attribute-value pairs;

at least one other server that:

receives a user selection of an expression of attribute-value pairs;  
produces at least one refinement option by processing the expression of attribute-value pairs, wherein the at least one refinement option produced by the at least one server and the at least one refinement option produced by the at least one other server form a plurality of refinement options;

combines the plurality of refinement options and plurality of ancestors to form combined refinement options, the combined refinement options including at least one refinement navigation state;

determines a the navigation state associated with the expression of attribute-value pairs;

provides materials associated with the navigation state; and  
provides the combined refinement options, wherein when the at least one server combines the plurality of refinement options, the at least one server:

takes a union of the plurality of refinement options,  
determines a set of ancestors for each refinement option of the plurality of refinement options, from the plurality of ancestors produced in the plurality of servers, to form sets of ancestors,

computes an intersection of all of the sets of ancestors, and computes the combined refinement options based on terms in the intersection of all sets of ancestors, including identifying at least two related terms among the

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plurality of refinement options, and computing, for the at least two related terms, a least common ancestor of the related terms, and

wherein at least one of at least one other servers acts as a master server; the at least one server includes a plurality of servers, and the plurality of servers act as slave servers; the master server distributes a request for a navigation state to the slave servers; the slave servers compute navigation states for ~~these~~ requests and return results to the master server based on the combining; and the master server combines the results from the plurality of slave servers to obtain a navigation state corresponding to the request, wherein the combining the results is based on the combining the plurality of refinement options and plurality of ancestors.

126. (Currently Amended) The system of claim 124, wherein the least common ancestor is defined by ~~the~~ partial order among the related terms.

### **Allowable Subject Matter**

3. Claims 94,96-99,101-106,108,109,111-114,116-121,123,124,126-129,131-136 and 138-144 are allowed.

The prior art of record, alone or in combination, does not teach or fairly suggest the combination of steps as recited in independent claim 94 (method), claim 109 (computer-readable storage medium), claim 124 (system), wherein, providing the combined refinement options, wherein the combining comprises: taking a union of the plurality of refinement options, determining a set of ancestors for each refinement option of the plurality of refinement options, from the plurality of ancestors produced in the plurality of servers, to form sets of ancestors, computing an intersection of all of the sets of ancestors, and computing the combined refinement options based on terms in the intersection of all sets of ancestors, including identifying at least two related terms among the plurality of refinement options, and computing, for the at least two related terms, a least common ancestor of the related terms, and wherein a first server of the plurality of servers acts as a master server and some of the plurality of servers act as slave servers, the method further comprising the master server distributing a request for a navigation state to a plurality of slave servers, the slave servers computing navigation states for requests and returning results to the master server, and the master server combining the results from the slave servers to obtain a navigation state corresponding to the request, wherein the combining



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the results is based on the combining the plurality of refinement options and plurality of ancestors”.

The dependent claims, bring definite, further limiting, and fully enabled by the specification are also allowed.

**Contact Information**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cam Y T. Truong whose telephone number is (571) 272-4042. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tony Mahmoudi can be reached on (571) 272-4078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cam Y Truong/  
Primary Examiner, Art Unit 2169